COUNTY OF LOS ANGELES
DEPARTMENT OF AUDITOR-CONTROLLER

JOHN NAIMO
ACTING AUDITOR-CONTROLLER

July 29, 2014

TO: Supervisor Don Knabe, Chairman
           Supervisor Gloria Molina
           Supervisor Mark Ridley-Thomas
           Supervisor Zev Yaroslavsky
           Supervisor Michael D. Antonovich

FROM: John Naimo
           Acting Auditor-Controller

SUBJECT: **INTERNAL SERVICES DEPARTMENT – COUNTYWIDE UTILITY BILLING SYSTEM REVIEW**

We reviewed the Internal Services Department's (ISD or Department) controls over its Countywide Utility Billing System (CWUBS or System). The System is used to pay the County's utilities (e.g., electricity, water, gas, etc.), and for contracted services such as solar retrofits. ISD also uses CWUBS to bill County departments for their share of the utility and contracted services costs. In Fiscal Year 2012-13, ISD paid more than $106 million through CWUBS.

The purpose of our review was to ensure County resources are safeguarded, and that ISD is complying with applicable policies and procedures. Our review included evaluating controls over System access and payment processing, including the submission of payments from CWUBS to the electronic Countywide Accounting and Purchasing System (eCAPS).

Results of Review

Our review disclosed opportunities for ISD to improve their controls over System access and payment processing.

System Access

System access controls enhance system security and data integrity, and help mitigate risks, such as data breaches that have recently occurred in the private sector. We noted the following access control issues:

- **Inappropriate Access** - ISD needs to restrict access based on work assignments. We noted eight employees have unneeded System access. One of these eight employees can edit finalized payment records, which is not appropriate for their work assignment. The other seven employees have access that they have not used in over a year, including one who has not used their access in approximately five years.

  ISD's response (attached) indicates that they reviewed all CWUBS users' access rights and ensured that access is appropriate for staffs' current work assignments and removed unneeded System access for seven employees. They also implemented a user access form to improve the review and approval of user access assignments and changes, and indicated that they will review user access rights annually.

- **Incompatible System Duties** - ISD needs to separate data entry and approval duties. We noted that four System users have the ability to data enter and approve payments in CWUBS. In accordance with County Fiscal Manual (CFM) Section 4.5.5, data entry and approval responsibilities should be separated. One of the users can also apply the second payment approval in eCAPS, and therefore can process payments of up to $5,000 on his own, increasing the risk for inappropriate activity.

  ISD management told us that they separated staffs' data entry and approval capabilities in CWUBS. ISD's response also indicates that they have created two additional user groups in CWUBS to prevent the same individual from processing payments on their own.

- **Monitoring High-Level Users** - ISD management needs to monitor users with high-level System access, as required by CFM Section 8.7.4.1. Three programmers have "super user" access, including the ability to modify users' access levels, change or delete payment information/history, and make System/program changes in CWUBS, but ISD management does not monitor these users' activity. We also noted that not all high-level activity can be monitored. Specifically, while CWUBS logs the date and time a user's System access is removed, it does not record the staff performing the activity.

ISD's response indicates that they modified several CWUBS audit trail reports to ensure all activity, including the removal of users' System access, is included. They also established procedures to periodically review these reports.

Payment Processing

We noted the following payment processing issues:

- **Duplicate Payments** - ISD needs to ensure staff review vendor/contractor account histories to avoid processing duplicate payments. We identified two duplicate payments that resulted in approximately $3,000 in overpayments. Staff would likely have determined that the services had already been paid if the account histories had been reviewed prior to processing the second payment.

  ISD's response indicates that they reinstructed staff to review vendor service account histories thoroughly before finalizing payment documents.

- **Payment Timeliness** - ISD needs to ensure that vendors are paid within 30 calendar days of receiving an invoice, as required by CFM Section 4.5.13. We reviewed seven energy contractor invoices and noted that two (29%), totaling approximately $26,000, were paid up to two months after receiving the invoices. Although ISD did not incur any late fees, the Department should ensure that vendors are paid timely.

  ISD's response indicates that they reminded staff to process invoices timely in order to pay vendors within 30 calendar days from receipt of the invoices.

- **Payment Record Modifications** - ISD needs to review and/or monitor changes to finalized payment records, which are used to bill County departments for their share of utility/services costs. We noted that six staff can change finalized payment records in CWUBS, without review and approval, increasing the risk for inappropriate changes, inaccurate records, and incorrect departmental billings.

  ISD's response indicates that they will implement an audit report to identify any changes to finalized payment records, and establish procedures to review the report monthly.

Details of these and other findings and recommendations are included as Attachment I.

Acknowledgement

We discussed our report with ISD management who agreed with our findings and have already implemented some of our recommendations. ISD's response is included as Attachment II.

We thank ISD management and staff for their cooperation and assistance during our review. Please call me if you have any questions, or your staff may contact Robert Smythe at (213) 253-0101.

JN:AB:RS:MP

Attachments

c: Jim Jones, Director, Internal Services Department
    William T Fujioka, Chief Executive Officer
    Public Information Office
    Audit Committee

INTERNAL SERVICES DEPARTMENT
COUNTYWIDE UTILITY BILLING SYSTEM REVIEW

Background

The Internal Services Department (ISD or Department) uses the Countywide Utility Billing System (CWUBS or System) to pay for the County's utility expenses (e.g., electricity, water, gas, etc.), and for contracted services such as solar retrofits. ISD also uses CWUBS to bill County departments for their share of the utility and contracted services costs. In Fiscal Year (FY) 2012-13, ISD paid more than $106 million through CWUBS.

We reviewed ISD's CWUBS procedures and controls to assess the Department's compliance with County Information Technology (IT) and fiscal policies. Our review included evaluating controls over System access and payment processing, including the submission of payments from CWUBS to the electronic Countywide Accounting and Purchasing System (eCAPS).

Access Controls

County Fiscal Manual (CFM) Section 8.7.4 requires departments to limit system access based on work assignments, periodically review user access to ensure it is authorized and appropriate, and requires that passwords are complex to maintain their effectiveness. These controls enhance system security and data integrity, and help mitigate risks, such as data breaches that have recently occurred in the private sector.

Inappropriate User Access

We noted 12 (41%) of 29 CWUBS users have unnecessary and/or inappropriate System access. Specifically:

- Eight (67%) users have access that does not match their job responsibilities. This includes:

  - One user can edit finalized payment records, which is not necessary for their work assignment. We reviewed System activity logs and determined that the unneeded access was not used.

  - Seven users have CWUBS access that they have not used in over a year, including one who has not used their access in approximately five years. Also, one of the users has administrative rights, including the ability to assign and change users' System access. Administrative rights should be limited to key individuals.

- Four (33%) users have the ability to data enter and approve payments in CWUBS. In accordance with CFM Section 4.5.5, data entry and approval duties

should be separated. One user also has the ability to apply the second payment approval in eCAPS, which allows him to process payments of up to $5,000 on his own.

We also noted that one user shared their user identification and password with two other staff, in violation of CFM Section 8.7.4.3.

To ensure information in the System is safeguarded, and minimize the risk of inappropriate activity, ISD management should implement the following recommendations.

Recommendations

Internal Services Department management:

1. **Restrict users' access to the Countywide Utility Billing System based on work assignments.**

2. **Establish proper separation of duties by separating payment data entry and approval capabilities.**

3. **Remind users not to share their user identification and password.**

Access Control Procedures

We identified several administrative and control weaknesses that contribute to access issues:

- **Access Role Capabilities -** ISD's policies and procedures do not define System access roles and their capabilities as required by CFM Section 8.7.4.2.

- **Access Authorization -** ISD does not document the approval of CWUBS access assignments or changes, and could not provide documentation to support that they periodically review the appropriateness of users' access as required by CFM Section 8.6.4. As previously noted, some users have unnecessary and/or inappropriate access.

- **Monitoring High-Level Users -** ISD does not monitor users with high-level System access as required by CFM Section 8.7.4.1. Specifically, three programmers have "super user" access, including the ability to modify users' access levels, change or delete payment information/history, and make System/program changes in CWUBS, but ISD management does not monitor these users' activity. We also noted that not all high-level activity can be monitored. Specifically, while CWUBS logs the date and time a users' System access is removed, it does not record the staff performing the activity.

- **Multiple Log-ons with Single Identification** - CWUBS allows multiple, simultaneous log-ons with a single user identification. The System should only allow one active session per user to help prevent inappropriate activity, including unauthorized System access.

- **Password Controls** - CWUBS does not reset passwords after 90 days, restrict the use of the previous password, or require that passwords include both upper and lower case letters as required by CFM Section 8.7.4.3. We also noted CWUBS does not encrypt user passwords. Specifically, CWUBS stores passwords in plain text, making them visible to system administrators and increasing the risk for inappropriate activity.

To ensure CWUBS access is authorized and appropriate, ISD management should implement the following recommendations.

Recommendations

Internal Services Department management:

4. **Update policies to define Countywide Utility Billing System access roles and their capabilities.**

5. **Document the approval of access assignments and changes, and the periodic review of users' access.**

6. **Log and monitor the activity of users with high-level access.**

7. **Evaluate restricting each user identification to a single active session at a time.**

8. **Ensure Countywide Utility Billing System passwords are encrypted and that the System enforces password controls as required by the County Fiscal Manual.**

Payment Processing

ISD staff data enter and approve utility vendor and energy contractor invoices in CWUBS. CWUBS then transmits payment request information to eCAPS to initiate the production of warrants. Before warrants are issued, a separate review and approval occurs in eCAPS to ensure the payment request information is accurate.

Duplicate Payments

ISD's procedures for processing payments require that staff review invoices to ensure they are not duplicates before data entering and approving them for payment.

Using computer-assisted audit techniques, we reviewed payments processed between July 2011 through June 2013, and noted two duplicate payments that resulted in approximately $3,000 in overpayments. In both cases, it appears that staff would likely have determined that the services had already been paid if the account histories had been reviewed prior to processing the second payment. While we noted the County received credit for the overpayments, ISD's management should ensure staff review each vendor's/contractor's account history before processing payments to help prevent duplicates from occurring.

Recommendation

9.   **Internal Services Department management ensure staff review each vendor's/contractor's account history before processing payments.**

Payment Timeliness

CFM Section 4.5.13 requires departments to issue vendor payments within 30 calendar days of receiving an invoice.

We noted that ISD does not always pay energy contractor invoices timely. Specifically, we reviewed a sample of seven invoices processed between July 2011 through June 2013, and noted that two (29%), totaling approximately $26,000, were paid up to two months after receiving the invoices. Although ISD did not incur any late fees, the Department should ensure that vendors are paid timely.

Recommendation

10.   **Internal Services Department management ensure staff pay vendors within 30 calendar days of receiving an invoice.**

CWUBS Payment Records

As previously discussed, CWUBS payment information is transmitted to eCAPS for approval and issuance of payments. Once issued, related warrant information is transmitted back to update CWUBS records. ISD uses CWUBS records to bill County departments for their share of utility/service costs.

We noted that six staff can change finalized payment records in CWUBS, without review and approval. This increases the risk for inappropriate changes, inaccurate records, and incorrect billings to County departments.

We also noted CWUBS records are not always updated with the eCAPS warrant information. Specifically, 96 CWUBS payments did not have the corresponding warrant number and amount. ISD management indicated that the warrant information was not available in eCAPS when the eCAPS-to-CWUBS data transfer occurred. However, ISD should have alternate procedures to ensure CWUBS records are properly updated.

To ensure CWUBS records are accurate and complete, ISD management should implement procedures for supervisors to review and/or monitor staff's changes to approved CWUBS payment records. ISD management should also establish procedures to update warrant information in CWUBS when the initial update is not successful.

Recommendations

Internal Services Department management:

11. **Implement procedures for supervisors to review and/or monitor staff's changes to payment records in the Countywide Utility Billing System.**

12. **Establish procedures to update warrant information in the Countywide Utility Billing System when the initial update is not successful.**

IT Risk Assessment

Board of Supervisors Policy 6.107 requires departments to assess information security risks on critical IT services, as part of the Auditor-Controller's Internal Control Certification Program (ICCP). Departments must certify that proper controls are in place, or that action is being taken to correct any weaknesses or vulnerabilities.

ISD management did not identify CWUBS as a critical system in their FY 2012-13 ICCP, and as a result, did not perform a risk assessment as required. Since CWUBS processes over $100 million annually in payments for utilities/services, and about the same amount in related billings to County departments, ISD management should ensure staff perform a risk assessment on CWUBS as part of the ICCP.

Recommendation

13. **Internal Services Department management ensure staff perform a risk assessment on the Countywide Utility Billing System as part of the Internal Control Certification Program.**

County of Los Angeles
INTERNAL SERVICES DEPARTMENT

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Director

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May 20, 2014

To: John Naimo
        Acting Auditor-Controller

From: Jim Jones
        Director

Subject: **REVIEW OF THE INTERNAL SERVICES DEPARTMENT'S
         COUNTYWIDE UTILITY BILLING SYSTEM**

Attached are our responses to the findings and recommendations contained in your report.

We thank your audit staff for their professionalism and objectivity during the review.

If you need any additional information, please contact me or your staff may contact Dave Yamashita at (323) 267-2136 or via email at dyamashita@isd.lacounty.gov.

JJ:DY:rc

Attachment

INTERNAL SERVICES DEPARTMENT

**RESPONSE TO THE AUDITOR-CONTROLLER AUDIT REPORT
REVIEW OF THE ISD COUNTYWIDE UTILITY BILLING SYSTEM**

Recommendation 1: Restrict users' access to the County Wide Utility Billing System based on work assignments.

ISD Response:

We concur.

ISD will review and limit access to the County Wide Utility Billing System (CWUBS) based on employee work assignments on an annual basis. For clarification, good business practices suggest to establish a plan to have alternate staff in place to function in the absence of the primary or in the event of an emergency. Staff noted as having unneeded access were designated as alternates and with this role may not have any occasion or need to access the system for long periods of time. Additionally, two of the seven function as alternates to users with high level roles and their daily activities do not require regular access.

User group access rights and screen privileges were reviewed and matched for all staff using CWUBS to ensure access was appropriate for the work currently being performed. Additionally, ISD deleted access for seven staff that currently have no direct need to use CWUBS to complete their work assignments.

Furthermore, ISD implemented a user access form to aid the determination and review of user access. See Recommendation 5 for further detail.

> Target Date: Implemented

Recommendation 2: Establish proper separation of duties by separating payment data entry and approval capabilities.

ISD Response:

We concur.

The County requires two or more levels of approval on all payment transactions. The County's financial accounting system, eCAPS, allows data entry and first level approval to be performed by the same individual to compromise between small accounting operations and maintain the segregation of functions as long as the second approval is performed by another individual with no other payment processing capabilities. ISD utilizes CWUBS in the same manner due to the limited number of accounting staff funded by the Utilities Budget.

After further review of job functions, ISD created two additional user groups (Approver and Administrator 1A) with limited system rights and screen access privileges to provide further separation of data entry, approval and interface functions for payments in CWUBS to ensure that payments under $5,000 could not be processed by the same individual through eCAPS.

Target Date: Implemented

Recommendation 3: Remind users not to share their user identification and password.

ISD Response:

We concur.

ISD Finance and MISD staff has been reinstructed not to share their user identification and passwords in accordance with the County Fiscal Manual (CFM) requirements.

Target Date: Implemented

Recommendation 4: Update policies to define Countywide Utility Billing System access roles and their capabilities.

ISD Response:

We concur.

Access role capabilities and password control requirements were added to the CFM subsequent to the completion of the audit.   ISD updated the CWUBS System Administration & User Manual to identify and define each User Group, the assigned access and privileges, and the expected staffing level for each group.

Target Date: Implemented

Recommendation 5: Document the approval of access assignments and changes, and the periodic review of users' access.

ISD Response:

We concur.

ISD implemented a user access form for CWUBS to document requests for new and updates to access rights. The form will require the signature approval of the requestor's Division Manager. The approved form will then be reviewed and processed by the Finance System Administrator. Additionally, ISD implemented a procedure whereby access rights will be reviewed by the Finance System Administrator on an annual basis

before October 1 of each year to ensure access is appropriate for the work being performed. The user access form includes a field for the Finance System Administrator to document the annual review of access rights. The form will be maintained for the duration the employee has access to CWUBS or 5 years after access is terminated.

Target Date: Implemented

Recommendation 6: Log and monitor the activity of users with high-level access.

ISD Response:

We concur.

ISD reviewed the content of and modified several audit trail reports to ensure that all activity including the removal of users' system access is included.

In ISD's effort to continuously comply with this requirement, all CWUBS audit trail reports will be reviewed by the Finance System Administrator on a quarterly basis. The Finance Division Manager will also review system audit reports annually.

Additionally, ISD deleted access for one of three System Administrators.

Target Date: June 30, 2014

Recommendation 7: Evaluate restricting each user identification to a single active session at a time.

ISD Response:

We concur.

Although this is not a CFM requirement, ISD updated the CWUBS production environment to only allow one active session per user. Additionally, ISD reinstructed Finance staff to avoid simultaneous log-ons to CWUBS to minimize unauthorized access.

Target Date: Implemented

Recommendation 8: Ensure Countywide Utility Billing System passwords are encrypted and that the System enforces password controls as required by the County Fiscal Manual.

ISD Response:

We concur.

Although password control requirements were added to the CFM subsequent to the completion of the audit, ISD has updated CWUBS to manage password controls via the County's Active Directory. Password assignments are now the same as for Hosted and the LA County Intranet. Controls are compliant with countywide policies per the ISD Department Information Security Officer.

> Target Date: Implemented

Recommendation 9: Internal Services Department management ensure staff review each vendor's/contractor's account history before processing payments.

ISD Response:

We concur.

ISD Finance staff currently review vendor service account history before finalizing payment documents in CWUBS and has been reinstructed to perform their reviews more thoroughly.

> Target Date: Implemented

Recommendation 10: Internal Services Department management ensure staff pay vendors within 30 days of receiving the invoice.

ISD Response:

We concur.

For clarification, ISD processed approximately 1,970 payments, totaling over $106 million, in CWUBS during FY 12-13 with an average of 164 payments per month. ISD staff, including Service Division and Finance Division staff, has been reminded to process the invoices timely in order to pay the vendors within 30 days from receipt of the invoices.

> Target Date: Implemented

Recommendation 11: Implement procedures for supervisors to review and/or monitor staff's changes to payment records in the Countywide Utility Billing System.

ISD Response:

We concur.

ISD will implement an audit report, which delineates any record changes after the payment is finalized in CWUBS. The Finance System Administrator will review this audit report on a monthly basis.

In addition, special permission field access will be limited to the Administrator 2 role to ensure that changes to the finalized payment information is restricted. For clarification, after a payment is finalized, CWUBS will only allow changes to the consumption units or service period fields.

> Target Date: June 30, 2014

Recommendation 12: Establish procedures to update warrant information in the Countywide Utility Billing System when the initial update in not successful.

ISD Response:

We concur.

ISD updated the automated post back process in CWUBS to obtain missed files at a later date. Additionally, ISD will develop an exception report to identify payment records which do not include warrant information for review by the Utilities Unit Supervisors on a monthly basis.

> Target Date: June 30, 2014

Recommendation 13: Internal Services Department management ensure staff perform a risk assessment on the Countywide Utility Billing System as part of the Internal Control Certification Program.

ISD Response:

We concur.

In accordance with Internal Control Certification Program (ICCP) instructions, CWUBS will be identified as a mission-critical system and included as an assessable unit for future ICCP reviews.

> Target Date: Implemented